



NEWS FOR AND BY BARS MEMBERS

# BARS Billerica Amateur Radio Society

NOVEMBER 2019

## From the President's Desk

from the President of BARS, Andy Wallace, K1GTT

Hello, fellow BARS members! November's meeting is coming up fast and it will be an interesting one! Jim, K1IR, will present for us the Tower Safety talk he gave at HamXposition and at Near-Fest. This is a subject important to all of us, even if you don't own a tower. You may someday! Or you may hear a friend discussing one and may want to steer him toward getting a pro to help him at it. As someone with a crusty and rusty tower, I am going to be taking notes.

Our November meeting will also be our time for Elections! See our website for the Slate of officers which will be voted on.

And as you have seen, our interim Newsletter Editor, Tom, K1TW, has been doing a fine job since Paula (KC1EDA) had to resign suddenly due to job duties. But the Newsletter is only as interesting as YOU and I make it. Please, folks, we ALL have knowledge to give and stories to tell. I would love BARS members to give presentations at our meetings, but if you have something you could share, consider doing so in an article for our Newsletter. Here are just some examples of topics I know I am not an expert on and which others would probably find interesting.

- How do you bring an older, disused, linear amplifier back into service? How do you rejuvenate tubes? Bring it up slowly without a 220V Variac?
- How about visiting or operating at one of the big contest stations. Which ones are open to the public or how do you join a contest team to operate?
- Which radio related museums are worth the drive?
- What kit or other radio project did you build recently?
- Who did you help with an antenna raising? Dipole, tower or otherwise?
- What radio concept did you just learn? For instance, I just helped tune a discone antenna for 6m use – and learned about how and why they work in the process!
- Did you buy a new, or used, rig recently? How do you like it and what made it worthwhile?

- Do you have a technique or set of tools that makes reliable connections to coax, ladder line, hardline, etc.?
- How do you organize your ham radio hobby – both equipment and time – to be effective?
- Is there a net or repeater or HF roundtable you enjoy getting on? Which one?
- When the bands are dead, how else do you enjoy radio? Do you do shortwave listening, or VHF/UHF scanning? What are your go-to stations or frequencies?
- Do you have a story about BARS in the "good old days?" Share it.
- Got any satisfying "DX victories" that would make a few interesting paragraphs?

You get the idea. We need content and it must come from you to be interesting. And it does not have to be long. A few paragraphs and an interesting photo would be perfect!

See you at the November meeting, everyone! And please invite other friends outside of BARS if they would enjoy Jim's talk.

Thanks,

Andy, K1GTT  
President, BARS

**Next BARS meeting:  
Wednesday November 6 at 7:00 PM**

## "Tower Safety – An Issue of Great Urgency for Amateur Radio"

Jim Idelson, K1IR, will present to us his tower safety talk.

Jim writes "Recent tragic events including the loss of our local friend, Joe K1JGA, and the serious injuries sustained by K1EEE drove Jim K1IR to do a full investigation of amateur radio tower fatalities in the US over the past 20 years. The results of the research are revealing and disturbing. But, they are also compelling. Come learn about the

seriousness of this issue and the three simple things every ham must do to get it under control."

Andy KA1GTT, BARS President, adds "As someone with a tower in disrepair – so much so that it should probably be dismantled – I plan to perk up my ears at Jim's talk. I remember some of my Mechanical Engineering statics classes and know that a steel tubing structure 50+ feet above the surface has a complex "free body diagram"! Wind, rain, sun, rotator torque and everything else immediately age even the best tower setups. When you throw used tower sections in the mix it adds up to a job best left to the experienced. I hope Jim teaches us all a lot about tower safety."

And a reminder: you do not need to be a BARS member to attend our meetings. Feel free to invite others to this. I'd love to see a big turnout.

Note: Club Elections will be held this night also. See you there!

## BARS Elections in November

from the President of BARS, Andy Wallace, KA1GTT

Everyone, I am happy to announce the following candidates for our Election at the next meeting.

Andy Wallace, KA1GTT: President  
Kayla Creamer, W2IRY: Vice President  
Bruce Anderson, W1LUS: Treasurer  
Scott Ginsburg, K1OA: Secretary  
Henry Christle, WA1VAB: Member of the Board  
Mike Raisbeck, K1TWF: Member of the Board  
Tom Walsh, K1TW: Past President (non-elected position)

## November Suggestions - Get-on-the-air Events

BARS is a "get-on-the-air" (GOTA) club. We encourage members to participate in the varied events on HF and VHF. Here are some popular suggestions for this month:

Date	Event
November 9-10	WAE DX Contest, RTTY <a href="https://www.darc.de/der-club/referate/referat-conteste/worked-all-europe-dx-contest/en/">https://www.darc.de/der-club/referate/referat-conteste/worked-all-europe-dx-contest/en/</a>
November 2-4	ARRL Sweepstakes Contest, CW <a href="http://www.arrl.org/sweepstakes">http://www.arrl.org/sweepstakes</a>
November 16-18	ARRL Sweepstakes Contest, SSB <a href="http://www.arrl.org/sweepstakes">http://www.arrl.org/sweepstakes</a>
November 23-24	CQ Worldwide DX Contest, CW <a href="http://www.cqww.com/rules.htm">http://www.cqww.com/rules.htm</a>
December 6-8	ARRL 160-Meter Contest <a href="http://www.arrl.org/160-meter">http://www.arrl.org/160-meter</a>

Details on each contest above and more events can be found every week on the WA7BNM contest calendar at :

<https://www.contestcalendar.com/weeklycont.php?mode=custom&week=current>

## Novice Radio History: Stations from the 60's and 70's

from Henry Christle, WA1VAB

It's November, let the intense ham radio devotion commence. The ARRL Sweepstakes 2019 kicks off November 2nd – 4th, I'm preparing with my 21<sup>st</sup> century transceiver, and N1MM for Computer logging and fun operating. Contesting is a fun sandbox, I don't need to win, just join in the fray. New equipment is perfection and fun, however analog equipment operation is potentially even more fun.

While considering this paradox, coincidentally, two interesting items crossed my desk; a QSL card I sent April 2, 1955 to a now a silent key, returned to me by his family. I'm thankful for the memories this QSL card brings me. The second item, somewhat related, is a YouTube video showing radios as old as the '40's but used by hams though the 60's and beyond.

What I want to share with BARS today I hope inspires you to visit this most interesting site: MIKROWAVE1, which is a YouTube account. The video, audio, presentation and delivery are outstanding. It's extremely easy listening. Enjoy the video, and consider subscribing:

<https://www.youtube.com/watch?v=cJntKIOgcx8>

The title and splash screen read "The Novice Station of the 1960s – 75 Part 2". At minute marker 9:00 my '55 Novice station was the object shown in his program! Imagine seeing and hearing a Heath AR-3, a \$29 kit, 5 tube (one is a 5Y3), general coverage ham receiver!

He went on to explain the popular vacuum tube transmitters, commercial and popular homebrew 6L6 17W, with 40m trap dipoles and the associated bullet proof high impedance Pi - loading networks. A few minutes later he graduated to a BC-348-Q, (RX in B-17, B-24, B-29) as I did in '55, and the distinctive sound still has much appeal to these ears, hearing it on the air, take me back to why analog radio was such great fun.

MIKROWAVE1 has 72 very worthwhile ham videos covering hands on stuff which attracted the kids before Facebook and cell phones. Informative video on ARC-5 receivers, in use of today's bands. Heath TX, Q-Multipliers and lots of test equipment.

Henry – WA1VAB

## The Hamshack Hotline - Free VoIP Network for Hams by Hams

from Guy DeMartinis, AC1BJ

A recent episode of the Ham Radio Workbench Podcast focused in-depth on the topic of voice over IP (VoIP) for amateur radio [1]. VoIP is also known as IP telephony and involves voice, and even multimedia communications, over IP networks such as the internet [2]. One implementation of VoIP for hams discussed during the podcast is the recent creation of a free VoIP phone network known as the "Hamshack Hotline" (HH). Following the podcast, I browsed to the Hamshack Hotline website to look (Figure 1) [3]. Although some hams may be quick to state that VoIP is not "ham radio" HH is a promising concept with a myriad of very practical uses for hams. HH phones and related bridges (analogous to nets) are being established in support of Army and Air Force MARS, ARES and other emergency operation centers (EOCs) as well as in the shacks of interested hams or those with severe antenna

restrictions. A primary objective of the HH is to augment support of emergency communications for such scenarios where the internet is still accessible. As VoIP is full-duplex another practical use is ham-to-ham troubleshooting support over the phone. For hams that must have rf "in-the-loop" in order to even consider using a communications technology HH VoIP-to-RF links have been configured, essentially Radio over IP (RoIP), analogous to Echolink, IRLP and WIRES [4]. For additional information one may visit the Hamshack Hotline YouTube channel or examine other supporting information online [5, 6].



Figure 1 Hamshack Hotline Home Page

It is very easy and inexpensive to join the HH network with all the necessary steps outlined on the HH website. It is important to choose one of the supported ISP hardware phones from the list available on the HH website [7]. Many of the supported phones may be purchased for very little money on e-bay. The phone I chose is a Cisco SPA-504G which I purchased with stand and wall wart for a grand total of \$38. One thing which is very important is to be sure the phone you purchase is listed by the seller as being unlocked and factory reset! By ensuring the phone is unlocked and factory reset the provisioning of the phone (i.e. adding it the HH) is an extremely simple process. There is also a support system where you can submit a help ticket and volunteers will attempt to assist you with the configuration of your phone if you run into problems (Figure 2). Although the network and support are free to the interested Ham you are encouraged to donate to support the effort, as it is a non-profit all-volunteer Ham endeavor. You must also register with the HH in order to receive support and to access any documentation found in the support center.

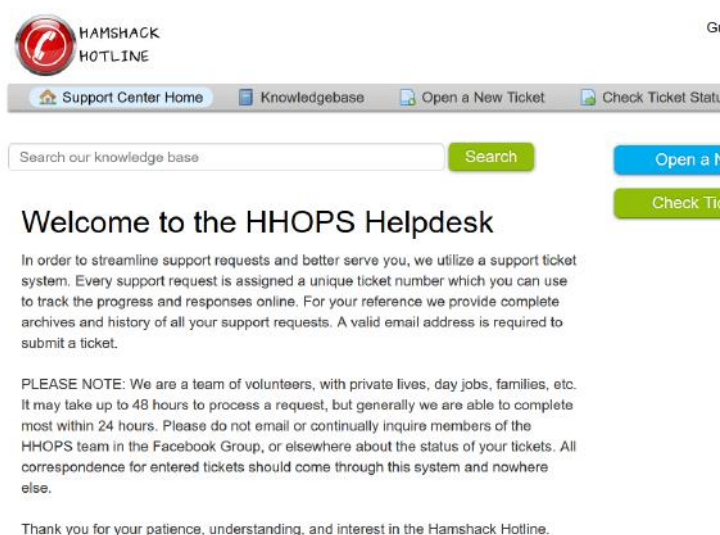


Figure 2. Hamshack Hotline Helpdesk Support Page

Once I had purchased a HH supported endpoint on e-bay (a Cisco SP-504G phone) I needed to connect it to my home network. Unfortunately, my shack is located a few rooms away from my Wi-Fi router and I did not want to run a 30-foot Ethernet cable between the phone and router. So, I purchased a TP-Link Wi-Fi extender for about \$20 on Amazon and used the extender to link my phone wirelessly with my home network. In order to allow provisioning of the phone as part of the HH I located the MAC address of my phone (on the back of the unit), created an account by registering with HH online, and opened a ticket to provision the phone being sure to include the model of the phone and the MAC address in the ticket. HH required my call sign as well to confirm that I am a licensed amateur radio operator. I was also careful to choose the Hamshack Hotline US server (HHUS) when configuring my registration request. Within one day I received notification via the HH Help desk that I can complete the steps to provision my phone. For this last step I copied a URL from the provisioning document associated with the specific phone model that I own and modified it to include the IP address of the phone as per my home network. For the Cisco SPA-504G the URL text I copied is as follows:

**[http://x.x.x.x/admin/resync?tftp://apps.wizworks.net/spacfg-\\$MA.cfg](http://x.x.x.x/admin/resync?tftp://apps.wizworks.net/spacfg-$MA.cfg)**

I needed to determine the IP address of my phone which was easy to do by either looking on my network to identify the phone or by perusing through the phone menus until the unit IP address was located. Once I found the IP address, I replaced the **X.X.X.X** portion of the URL shown above with the IP address and pasted the final URL into my web browser, being sure my phone was active on my home network. Ideally my phone should have restarted and, if all went well, I should have seen my call sign appear on the phone LCD screen and hear a dial tone when listening on the handset. Unfortunately, my first attempts were not successful, and it became clear after some troubleshooting that my firewall was blocking the provisioning attempts. I submitted a request for support via the HH help desk and within about two days a volunteer suggested a fix which did the trick.

For a total cost of less than \$60 I have added a new form of ham-to-ham communications technology to my amateur radio arsenal of tools. My IP phone is now part of the HHUS network and has a nice corner-spot on one of my ham shack benches (Figure 3). I am looking forward to



exploring the HHUS network in the weeks and months to come and anticipate many other creative applications of this technology. If you happen to call my HH phone and I am not available, please leave your message after the tone!



Figure 3. My Hamshack Hotline Provisioned Cisco SPA-504G IP Phone in My Shack.

#### References:

- [1] <https://www.hamradioworkbench.com/podcast/Voice-Over-IP-for-Ham-Radio>
- [2] [https://en.wikipedia.org/wiki/Voice\\_over\\_IP](https://en.wikipedia.org/wiki/Voice_over_IP)
- [3] <https://hamshackhotline.com/>
- [4] Steve Ford, "VoIP and Amateur Radio", QST Magazine, February 2003
- [5] <https://www.youtube.com/channel/UCWmgzCPp7cpoNSEgACxZIoA>
- [6] [http://www.w7aia.org/meetings\\_files/docs/2019-03-01\\_ham\\_shack\\_hotline\\_AA6RV.pdf](http://www.w7aia.org/meetings_files/docs/2019-03-01_ham_shack_hotline_AA6RV.pdf)
- [7] <https://hamshackhotline.com/wp-content/uploads/2018/05/HH-Supported-Endpoints1.pdf>

73,

Guy DeMartinis, AC1BJ  
Email: [ac1bj@arrl.net](mailto:ac1bj@arrl.net)  
HH Phone: 4995

## BARS Membership

As of November 1, we currently have 91 members. We have two new members from the October VE session Daniel KC1MBK and Amit AC1IH.

## 2019 BARS Member Dues - Please Renew now!

The BARS Board has changed the policy on member dues. A \$15 annual BARS membership now runs from January 1 and expires on December 31<sup>st</sup>. Any renewal or new membership made after September 1 will be valid until December 31 of the next year. Memberships allow us to:

- Pay our bills;
- maintain our great web page;
- fund field day;
- and bring the membership a great variety of informative meetings and speakers.

## Treasurers Report

from Bruce Anderson, W1LUS

Reminder 2020 Dues are due starting January first.

In October we had two members renew their membership for 2020 for \$30 income. PayPal fees were \$1.48. I shifted money from our PayPal account to our bank account to balance them. We now have \$207.59 in the Bank, \$214.68 in our PayPal account and \$10.00 in Cash for a total of \$432.27

## VE Report

from Bruce Anderson, W1LUS

At the October BARS VE exam session five people showed up for testing. Two passed the Technician exam. Their callsigns are KC1MBK, and KC1LXT upgraded to General. One new ham passed the Technician, General and Extra tests. His call sign is AC1IH. Be sure to say hello if you hear one of them on the air.

The VE's at the session were Gary W1GFF, Donald KA1MAP and Scott K1OA.

Next Session: Thursday, November. 14, 2019.

## BARS Needs You!!!

We are looking for a few good hams to act as net control on the regularly scheduled Wednesday night nets! All it takes is one night a month; if you are interested contact Chris, KC1IUK. Also, the club needs volunteers for light tasks of ~ 1 hour a month. Are you able to pitch in? Contact Andy, KA1GTT.

## Wednesday Night Net

Join us on the Billerica Repeater for the weekly BARS net (except on 1st Wednesday of Month which is club meeting night)

Repeater info:

147.12 MHz

+600 kHz (normal) offset

Encode CTCSS 103.5 Hz

## Club Meetings

First Wednesday of the month at 7:00PM at Chelmsford Bible Church, 128 Gorham St., Chelmsford MA  
Park in back and enter by rear door  
[Chelmsford Bible Church Hall, 128 Gorham St, Rear Door, Chelmsford MA 01824-3220 \(map\)](#)

## VE Sessions

VE sessions are held every month on the 2nd Thursday at 7:00 PM at Chelmsford Bible Church, 128 Gorham St., Chelmsford MA. Park in back and enter by rear door. [Chelmsford Bible Church Hall, 128 Gorham St, Rear Door, Chelmsford MA 01824-3220 \(map\)](#)

## Club Breakfast every Saturday

On Saturday mornings around 8:15AM, we also meet weekly for a casual, social breakfast at Stelio's restaurant.  
[Stelio's Family Restaurant, Billerica, MA \(map\)](#)

## BARS Leadership Team:

President: Andy Wallace, KA1GTT  
Vice President: Kayla Creamer, W2IRY  
Treasurer: Bruce Anderson, W1LUS  
Secretary: Open pending election  
BoD: Mike Raisbeck, K1TWF  
BoD: Henry Christle, WA1VAB  
Past President: Tom Walsh

## BARS Volunteer Team:

Website: Kayla Creamer, W2IRY  
PR/Social Media: Kayla Creamer, W2IRY  
Net Manager: Chris Lobdell, KC1IUK  
VE Manager: Bruce Anderson, W1LUS  
VE Manager: Gary Frascarelli, W1GFF  
Newsletter: Open

## Net Control Operators:

Chris Lobdell, KC1IUK  
John Fisher, KC1FTJ  
Andy Wallace, KA1GTT  
Tom Walsh, K1TW  
Paul Pellegrini, K1VK

Please contact Chris, KC1IUK, and volunteer as an additional net control so we can put your name here too.

## Future Meetings:

12/4: Terry, KA8SCP on Emergency Communications, RACES, and ARES.

1/8/20: BARS Holiday Party (shifted a week from normal meeting night as 1/1 is Wednesday).

2/5: Mike, K1TWF, recap of ARRL Board Meeting.

## Contributors to this month's Newsletter:

This newsletter has been brought to our members by the combined efforts, articles, and help from the following:

Andy, KA1GTT,  
Tom, K1TW,  
Marla, WA1GSF,  
Kayla, W2IRY  
Henry WA1VAB,  
Guy, AC1BJ  
Gary, W1GFF  
Bruce, W1LUS